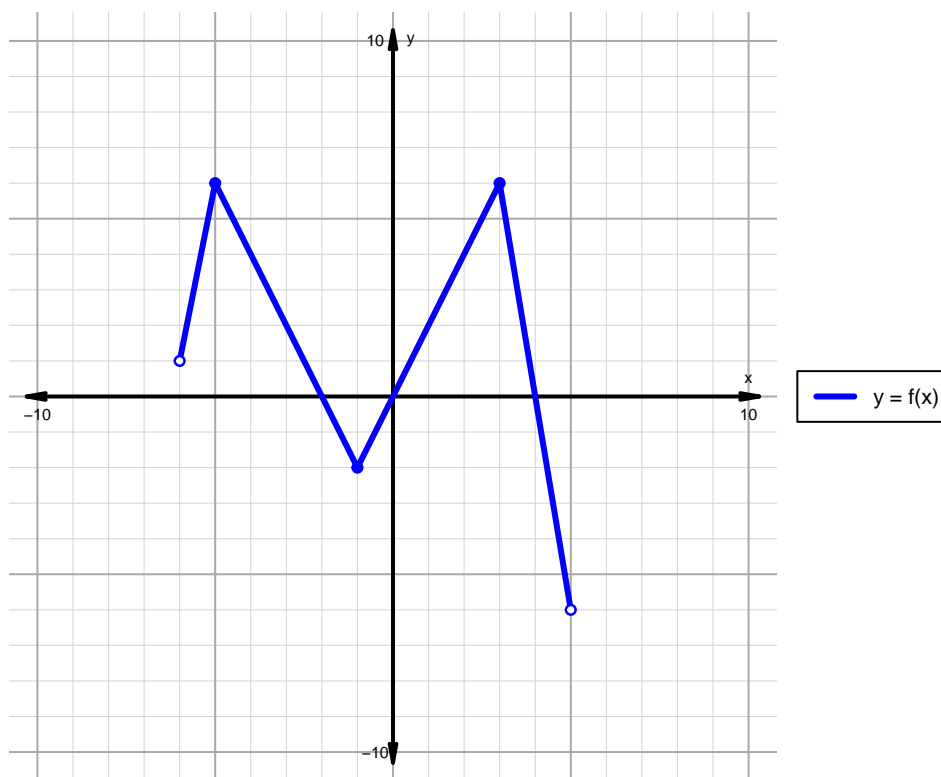


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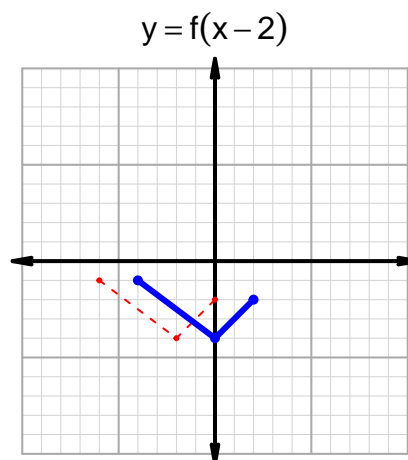
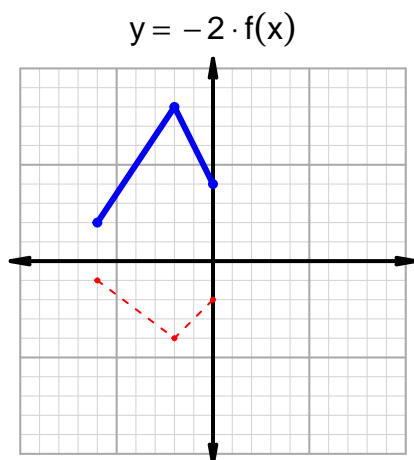
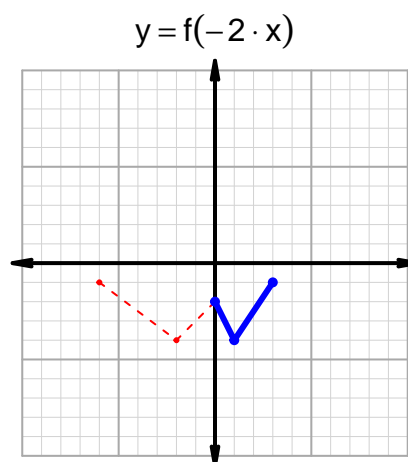
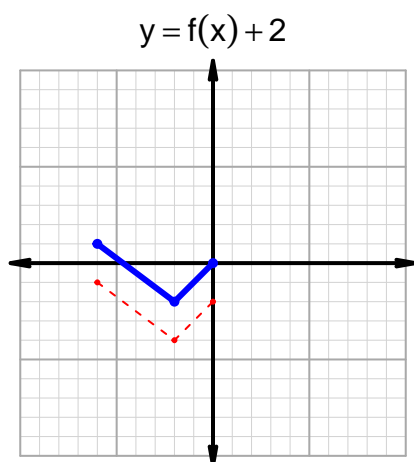
Intervals, Transformations, and Slope Solution (version 45)1. The function f is graphed below.

Indicate the following intervals using interval notation. Remember, you can use \cup between two intervals to indicate the union. Except for range, all intervals will indicate x values; this is standard.

Feature	Where
Positive	$(-6, -2) \cup (0, 4)$
Negative	$(-2, 0) \cup (4, 5)$
Increasing	$(-6, -5) \cup (-1, 3)$
Decreasing	$(-5, -1) \cup (3, 5)$
Domain	$(-6, 5)$
Range	$(-6, 6)$

Intervals, Transformations, and Slope Solution (version 45)

2. In the four graphs below, $y = f(x)$ is graphed as a dotted line. With a solid line, please graph the transformations indicated by the equations below.



3. Let function g be defined by the table below. Use the formula $\frac{g(x_2) - g(x_1)}{x_2 - x_1}$ to find the average rate of change between $x_1 = 27$ and $x_2 = 90$. Express your answer as a reduced fraction.

x	$g(x)$
22	90
27	22
90	94
94	27

$$\frac{f(90) - f(27)}{90 - 27} = \frac{94 - 22}{90 - 27} = \frac{72}{63}$$

The greatest common factor of 72 and 63 is 9. Divide numerator and denominator by the greatest common factor.

$$\text{AROC} = \frac{8}{7}$$